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Donald C. Brittingham
Director – Wireless/Spectrum Policy

November 3, 2004

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W., Room TW-A325
Washington, D.C. 20554

Re: *Ex Parte* Presentation
WT Docket No. 03-103; "Air-Ground Telecommunications Services"

Dear Ms. Dortch:

On behalf of Verizon Airfone, the attached technical paper is filed for inclusion in the above-captioned proceeding. This paper, prepared by Telcordia Technologies, assesses the "new" Air-to-Ground ("ATG") band-sharing proposal recently made by AirCell and Boeing (AirCell Ex Parte letter of October 26, 2004). As Telcordia describes in its paper, this proposal is not "new" at all. It continues to rely on cross-polarization to accommodate multiple ATG systems in the same spectrum, and suffers from many of the same flaws as AirCell's earlier proposal. It would result in significant interference to ATG systems – and not just from aircraft flying at low altitudes, but also from aircraft flying at cruise altitudes. Following is a summary of the main problems with the AirCell/Boeing proposal, as noted in the Telcordia analysis:

- The proposal, which relies on cross polarization to mitigate interference, does not differ significantly from the previous plans proposed by AirCell and suffers from many of the same flaws as these previous proposals.
- AirCell has still failed to provide any data that adequately supports its claim that cross polarization will provide sufficient isolation to prevent harmful interference.
- The amount of interference protection proposed by AirCell is woefully inadequate – at least several orders of magnitude less than protections afforded to services, such as cellular and PCS, that operate in the same geographic areas but in adjacent bands.
- Polarization isolation cannot be reliably maintained (at any adequate level) in the ATG environment.

- Because of the low, unpredictable, and varying levels of cross-polarization isolation, the two competing cross-polarized systems would have to be closely coordinated and effectively would have to be operated in tandem.
- Polarization isolation requirements could not be effectively enforced by the Commission.
- The proposal would not support the high traffic densities needed near airports.
- AirCell's polarization isolation analysis based on aircraft pitch and roll is incomplete and does not account for the cross-polarization interference due to the aircraft elevation, nor does it account for the effect of reflections. AirCell's results suggest that cross-polarization interference is negligible at cruising altitude, which is clearly not true if the effect of aircraft elevation is taken into account.
- The power levels suggested (200 mW) will not support the provision of broadband service.

Pursuant to Section 1.1206(b)(2) of the Commission's Rules, an electronic copy of this letter is being filed for inclusion in the above-referenced docket.

Sincerely,

/s/ Donald C. Brittingham
Donald C. Brittingham

Attachment

cc: Bryan Tramont
Sheryl Wilkerson
Sam Feder
Jennifer Manner
Paul Margie
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John Muleta
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